

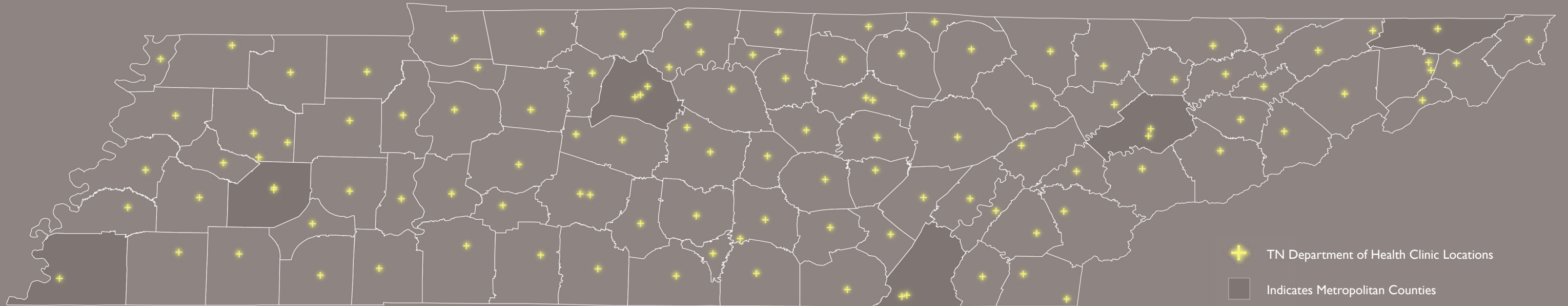


ACTIVE BUILDING GUIDELINES

DESIGNING A HEALTHIER TENNESSEE

ACTIVE BUILDING GUIDELINES

TENNESSEE



NASHVILLE CIVIC DESIGN CENTER - TENNESSEE DEPARTMENT OF HEALTH

NASHVILLE CIVIC DESIGN CENTER

The mission of the Nashville Civic Design Center is to elevate the quality of Nashville's built environment and to promote public participation in the creation of a more beautiful and functional city for all.

www.civicedesigncenter.org

TN DEPARTMENT OF HEALTH

The mission of the Tennessee Department of Health is to protect, promote and improve the health and prosperity of people in Tennessee.

<https://www.tn.gov/health>

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Commissioner John J. Drezeyhner, MD, MPH, FACOEM

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Are We There Yet? Artist, Duncan McDaniel. Commissioned by the Metro Nashville Arts Commission as part of the Percent for Public Art program.

FOREWORD

FORWORD

At the Tennessee Department of Health, over 120 county health departments in all of our 95 counties provide a wide range of highly valued services to people in Tennessee. Our staff provide essential downstream healthcare services in our primary care, infectious disease and dental clinics, and upstream, prevention oriented services like vital preventive screenings and care for children and adults; a complete offering of vaccinations; Women, Infant, Children (WIC) clinics providing critical nutrition information and support for mothers and their children; and much more. Surveys of our patients and other customers year after year let us know that they feel valued and highly satisfied, knowing that they are receiving quality healthcare and many other services from our trusted and compassionate health teams all over Tennessee.

Building upon our recognized and trusted quality population health services, we hope to create even better physical spaces where the culture of health we are striving to create can become more visible and nudge everyone around our places towards their optimal health. To that end, our Tennessee Department of Health has created these Active Building Guidelines to help shape the features of our buildings that make them inviting and healthy places to visit and work. These features positively enhance physical and mental health by incorporating elements such as physical activity opportunities, natural lighting from windows, bicycle racks, inviting staircases, food preparation areas, walking tracks, workout rooms, standing desks and low or no VOC paint. The guidelines include a menu of over 70 items and are intended to be a conversation starter for decision makers such as mayors and architects to consider features when a health department is being renovated or reconstructed to help make a building a more pleasant, healthy and enjoyable place.

The use of these guidelines is not limited to health departments, but may be used with other municipal buildings including schools, city halls and department buildings, as well as private sector businesses and healthcare facilities. The Tennessee Department of Health is leading by example, helping individuals, neighborhoods, communities, businesses, local governments, faith communities, and healthcare to create the conditions and expectations in our culture that support the primary, upstream prevention of disease and promotion of health and wellbeing towards an ever more vibrant and prosperous Tennessee.

Dr. John J. Dreyzehner
Commissioner, Tennessee Department of Health



Courtesy of Gresham, Smith and Partners; Copyright Jeffrey Jacobs Photography

INTRODUCTION

Active Building Guidelines

Introduction

“Architects are public health workers [...] We have a partnership—public health professionals and architects and planners. Our minds have to talk because we have an influence on America’s public health that we’re only now beginning to grasp.”

Acting U.S. Surgeon General Rear Admiral Boris Lushniak, 2014

The State of Tennessee is among an increasing number of states facing epidemics of preventable diseases. The United Health Foundation’s 2017 Annual Report ranked Tennessee 45 out of the 50 states for its health, noting that TN has some of the highest levels of cardiovascular disease, obesity, and general physical inactivity¹. These largely preventable conditions often stem from a progressively sedentary lifestyle, and a built environment that encourages inactivity and health defeating behaviors.

Over the last 20 years, researchers and health professionals have devoted increasing attention towards the intersection of the built environment and health. Findings from these studies overwhelming point towards a clear and distinct connection between the way our buildings and communities are designed, and resulting community health². With these findings, there has emerged a wealth of guides, toolkits, and best practices on how to create buildings that promote health. However, no resources exist regarding the context of public health buildings, or created to the specific context of Tennessee. In response, the Tennessee Department of Health has partnered with the Nashville Civic Design Center in creating the *Active Building Guidelines*.

The *Active Building Guidelines* is a next-step implementation guide, providing health promoting building recommendations for use in public health buildings across the state of TN. As local centers of health within each county, these guidelines aim to assist each public health building towards being an asset and model of individual and community health. This toolkit therefore is a unique resource for the predominantly rural contexts within the majority of Tennessee’s public health buildings exists.

Recognizing the varied realities of each public health building, this resource doesn’t make recommendations based on a single set of preexisting design suggestions. Rather, the *Active Building Guidelines* draws influence from many resources, including a 2016 survey of TN County Health Directors, and appropriately adapts each suggestion while maintaining each’s integrity and focus on health promoting features. Due to its specific situation, each county may find total reconstruction of a health department building is rarely feasible or necessary. Each recommendation is therefore intended to be considered contextually, and as a result, not all recommendations will be feasible for every project.

It is the ultimate goal of these Guidelines to provide attractive and desirable health promoting adaptations that whenever possible, maintain or increase convenience of use. To this end, it is believed that the successful incorporation of these recommendations will lead to increases in the social connectedness and health of all those who work in and visit each of the nearly 120 public health buildings throughout Tennessee.

¹ America’s Health Rankings® Annual Report 2017, United Health Foundation.

² Jackson, R., & Kochtitzky, C. (2001). *Creating a Healthy Environment: The impact of the built environment on public health*. Washington, DC: Sprawl Watch Clearinghouse.

PRECEDENTS



The following precedents demonstrate the successful implementation of many of the recommendations found in this guide. Each has adapted its construction to its unique context, all while successfully providing a healthier experience for clients and employees alike. As a result, all three have been awarded Leadership in Energy and Environmental Design (LEED) Certification.





QUICK FACTS

Completion Date: 2011

Square Footage: 50,000 SF

Acres: 10.1

Awards: LEED Platinum

Upper Cumberland Regional Health Facility

Cookeville, TN

Upland Design Group

Facing a need for greater regional healthcare space to accommodate growth throughout the region, the Upper Cumberland Regional Health Facility was constructed in 2011 by the Upland Design Group. The building's construction was divided out into four functions: a clinic, administrative spaces, a conference center, and space for general building services. Through intentional design elements, the developers sought to create a healthy, productive, and responsible building. The resulting facility therefore incorporates features like an indoor environment emphasizing natural daylight and views of nature throughout 90% of the building, low volatile organic compounds emitting materials, and the utilization of recyclable materials. The facility also focuses on energy efficiency and low CO₂ emission through the use of geothermal heating and cooling, reflective roofing, stormwater reuse and management, and low water usage toilets. Those features culminated into the shaping of a building that is designed for both form and function, that has been awarded LEED Platinum certification, the highest level of design recognition within LEED.

The 50,000 square foot one-story facility, located in Cookeville, provides leadership and management to 14 county health departments: Cannon, Clay, Cumberland, DeKalb, Fentress, Jackson, Macon, Overton, Pickett, Putnam, Smith, Van Buren, Warren and White. The facility houses a tuberculosis clinic, women's health specialty clinic, and an HIV center of excellence clinic.





QUICK FACTS

Completion Date: July 2014

Square Footage: 106,000 SF

Acres: 4.35

Awards: LEED Silver

Lentz Public Health Center

Nashville, TN

Gresham, Smith and Partners

Replacing the original 1958 health building, The Lentz Public Health Center in Nashville comprises 106,000 square feet, and was designed by Gresham, Smith and Partners. The facility combines county and city administrative offices with a health clinic, providing both visitors and employees with a healthy and pleasant experience. Building upon Metro Public Health Department's principles of encouraging healthy, active, and sustainable lifestyles, the design team set an example for healthy buildings by creating six additional guiding principles:

1. Be designed to enhance services through hospitality, efficiency, equality, accessibility and flexibility.
2. Provide a place of safety, security and privacy for visitors, health information data and employees.
3. Set an example for healthy living to support and promote the health and well-being of people and employees.
4. Provide facilities that support community connection, interaction and outreach.
5. Express a culture of compassion and caring of the Metropolitan Public Health Department toward a diverse community.
6. Act as a "good steward" of both the environment and of the taxpayer's dollars by providing a first class facility that utilizes sustainable and smart building design solutions.

The resulting facility contains a large open three story lobby, an accessible and inviting main staircase that encourages walking while incorporating public art, windows that let in significant amounts of natural lighting and views throughout the building, electric vehicle charging stations, rain and water collection systems, and a ¼ mile indoor walking loop with fitness center. Lentz also incorporates multi use rooms, allowing space for targeted health interventions, a public kitchen encouraging food demonstrations, and places for public events. From these efforts, Lentz has received LEED Silver certification. Lentz successfully supports the clinical and administrative needs of the five public health bureaus that operate within Lentz. To this end, the first and second floors consist of clinic space, while administrative space for over 300 employees is located on the second and third floors.





QUICK FACTS

Completion Date: October 2013

Square Footage: 19,000 SF

Acres: 2.8

Awards: LEED Gold

Kaiser Permanente Ko'olau Clinic

Kaneohe, Hawaii
Next Design

In October 2013, Kaiser Permanente completed the second and final phase of renovations to their Koolau clinic in Hawaii. The two phases, a 6,000 square foot expansion followed by interior and general site improvements, improved upon the existing dimly lit clinic. Both staff and patients reported regular challenges resulting from little natural light, air circulation issues, and space limitations. The developer, Next Design, was chosen to assist Kaiser Permanente with the renovations, and placed a strong focus on a synergistic approach to designing the renovations.

Careful steps were taken to maintain and enhance the strong culture of the surrounding community. during the redesign These included opening up the clinic with more natural light and improved light levels, redesigning the interior to encourage better internal mobility, incorporating native plants in and around the building, and an internal exhibit with commissioned art. Simple landscaping techniques such as moving around natural moss and other plants, created a brighter and more inviting entrance. Along with the successful focus on improving patient and staff experience, the Ko'olau clinic renovations received a LEED Gold Certification, the first ever LEED certification for a medical office.





IMPLEMENTATION

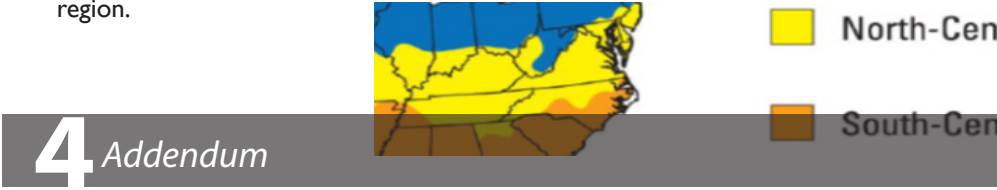
The remaining sections outline the actual recommended health promoting design feature. Included are a visual toolbox with feature descriptions, health department case studies with conceptual images of design feature implementation, the Active Building Guidelines design checklist, and concludes with supporting resources.



<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ENERGY STAR® certified roofing (see Addendum I).
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The building incorporates a partial or full green roof.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Whenever feasible, the green roof includes employee access with nature.

3 Design Checklist

III ENERGY STAR® Window and Door Recommendations:
For windows and doors, ENERGY STAR® certification levels vary depending on region. Parts of Tennessee fall within either the North-Central or South-Central region.



Source: ENERGYSTAR® Climate Zone Map

TOOLBOX

The following images demonstrate real world implementation of many of the health promoting design recommendations.

Workout Park



Location: New Canaan, Connecticut

Benefits: Encourages exercise, use of public places, and gets people outdoors.

Window & Views



Location: Terry Thomas in Seattle ,Wa

Benefits: Increased natural light, sense of building openness, and potential reduction in energy costs.

Skylights



Location: Welch Allyn Building in Skaneateles, NY

Benefits: Increased natural light, sense of building openness, and reduction in energy costs.

Healthy Snack Options



Location: Madison, WI

Benefits: Provides healthier alternatives to typical vending machine snacks.

Centralized Staircase



Location: Nashville headquarters of Gresham Smith and Partners

Benefits: Encourages exercise, use of public lobby, and social interactions.

Incorporated Artwork



Location: Jackson-Madison Regional Health Department

Benefits: Makes spaces more inviting and inspires creativity.

Community Gardens



Location: Blue Cross Blue Shield in Chattanooga, TN

Benefits: Gardening often is associated with therapeutic feelings, as well as healthy food production, sustainable use of the environment, and community engagement.

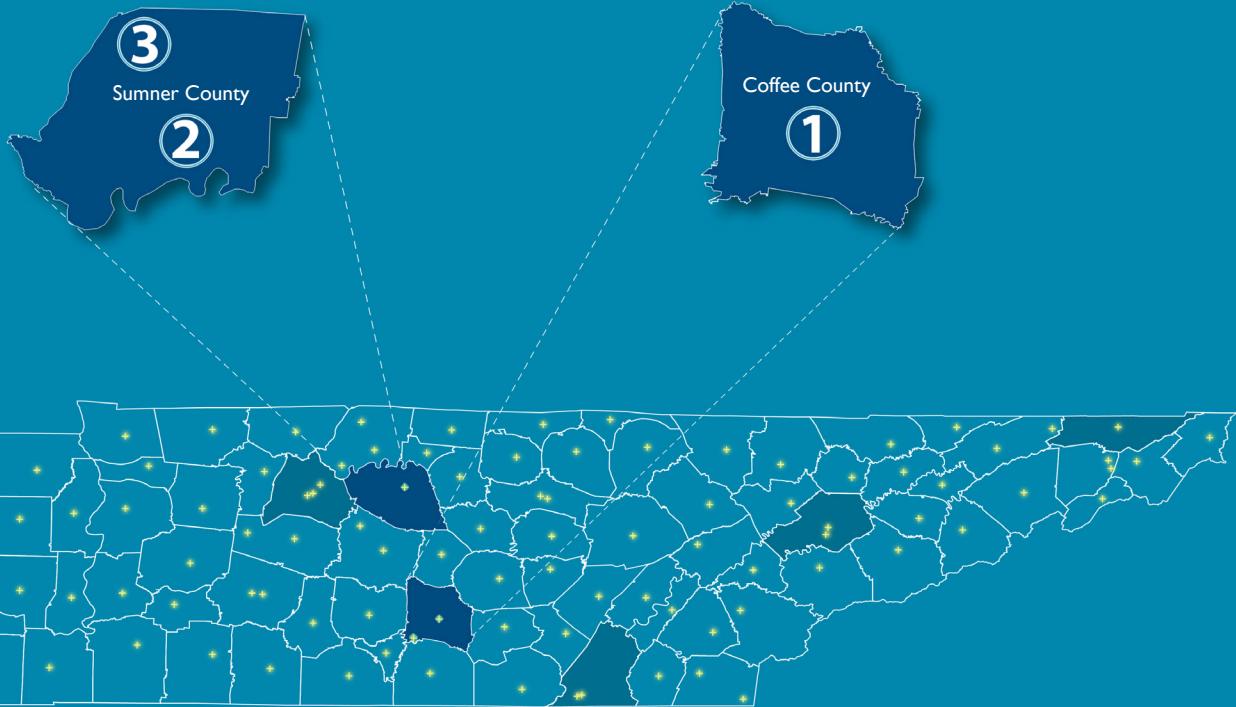
Bike Path Through Garden



Location: Madison, WI

Benefits: Incorporating paths for biking and/or walking paths encourages exercise, social connections when done with others, and engaging with nature.

CASE STUDIES



The following case studies reimagine different county health departments with the incorporation of several health promoting design recommendations. Each reinvisioning has been thoughtfully crafted with consideration for the location and context of the building.



Coffee County Health Department



Sumner County Health- Dodson Family Health Center



Sumner County Health Department- Portland Clinic

Coffee County Health Department

800 Park Street | Manchester, TN 37355

One of two health departments located within Coffee County, the Manchester Health Department provides a wide spectrum of services to residents and visitors throughout Coffee County. While housed in a small building, the Manchester clinic provides a full array of public health services including child health, women’s health and family planning, dental services, nutritional education, immunization and infectious disease support, emergency preparedness, and even motor vehicle registration.

The approximately 4,200 office sits on a 1 acre plot, and is located adjacent to a large regional health center. The current building was constructed in the mid 1950’s.



Acres: 1.0
Square ft: 4,165
Other uses in the building: None
Adjacencies: Hospital, Residential



DESIGN COMPONENTS

- 1 Walking Path for Employees and Public
- 2 Playground for Children
- 3 Public Bench
- 4 Privacy Shrubs Along the Road



BEFORE

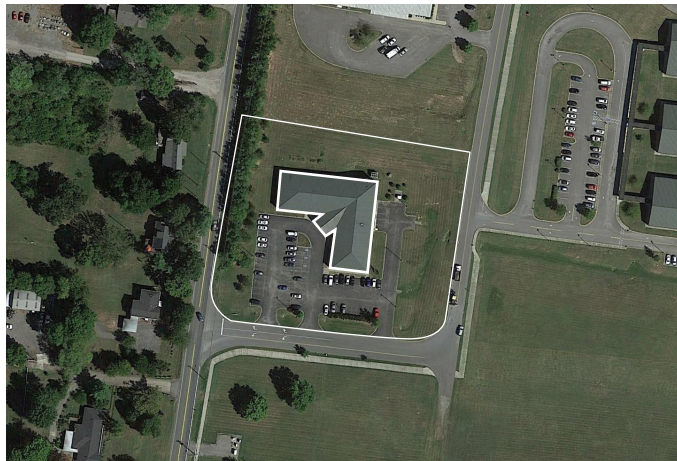


AFTER

Sumner County Health Department-
Dodson Family Health Center
1005 Union School Rd | Gallatin, TN 37066

The Dodson Family Health Center, located in Gallatin, is the largest of the three health facilities in Sumner County. In addition to primary care, services include child and family health, WIC services, family planning, disease control and prevention services, and a health lab. The Gallatin clinic works alongside the clinics in both Portland and Hendersonville in coordinating services across the county.

The two story clinic encompasses 15,000 sq ft and sits on roughly 2.8 acres. Built in 1999, the Dodson Family Health Center is adjacent to residential units, a community center, an elementary school and connects to a greenway.



Acres: 2.8
Square ft: 15,000
Other uses in the building:: Dental Clinic
Adjacencies: School, Recreation Center,
Greenway, Residential



DESIGN COMPONENTS

- 1 Additional Large Windows with Views of Nature
- 2 More and Diverse Workout Equipment
- 3 Tile Floors and Workout Mat
- 4 Accessible Water Fountain with Filter
- 5 Brighter and Energy Efficient Lighting



BEFORE

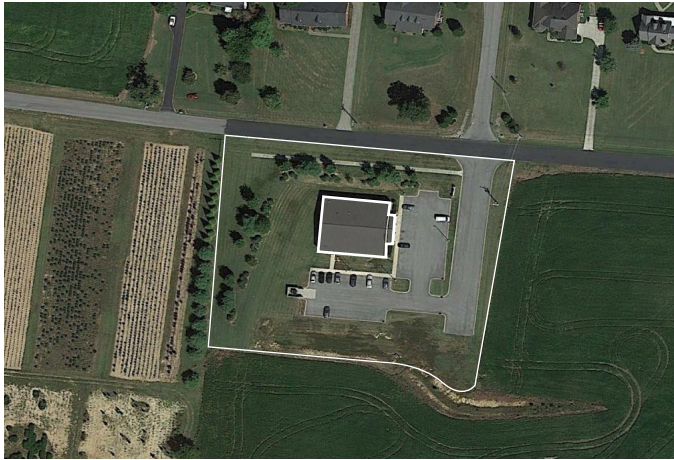


AFTER

Sumner County Health Department- Portland
214 W Longview Dr. | Portland, TN 37148

Located in north central TN, Sumner County’s Portland Health Department is one of three health facilities located across the county. Some of the services include children’s special services, child health, family planning, immunizations, emergency response planning, and general health care. The Portland department works alongside clinics in both Gallatin and Hendersonville in providing services across the county.

At 6,000 sq ft, the Portland clinic is located on just over 2 acres. The building, constructed in 2007, is adjacent to residential, agricultural, and an ER facility.



Acres: 2
Square ft: 6,000
Other uses in the building: None
Adjacencies: Residential, Agricultural



DESIGN COMPONENTS

- 1 *Wider Hallways*
- 2 *Local Art Throughout Hallway*
- 3 *Skylights and Brightened Lighting*
- 4 *Bright and Inviting Colors*



BEFORE



AFTER

DESIGN CHECKLIST

Renovation

New Building

Addition

Tax Credit

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BUILDING USAGE

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ENERGY STAR® certified roofing (see Addendum I).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> The building incorporates a partial or full green roof to reduce energy needs.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Whenever feasible, the green roof includes employee and/or public access to increase interactions with nature.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Multipurpose or shared spaces are available for use by multiple departments and/or the community.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Community or shared spaces are located in central locations, and a comfortable walk from most work area.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Shared rooms have easily fold away tables and chairs for easy room rearrangement.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Shared rooms utilize technology such as projectors, computers, smart boards etc for diverse and accessible uses.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Commonly used appliances and amenities are located in public places to encourage walking, and encourage usage of shared spaces (ex coffee makers in kitchens, bathrooms in central lobby's or hallways).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The building contains multiple entrance/exit points for ease of use and access.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Non carpet flooring to reduce cleaning, and allergens.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Walk off mats present at each entrance to control for dirt and allergens.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Internal bike rack or storage for employee use.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Shower and locker rooms for staff usage, to encourage physical activity before and during the workday.

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Use of green/renewable energy sources for the building such as solar, hydropower, wind or geothermal.

WINDOWS

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Large, clear windows that support NOAO recommended lumen levels (see Addendum II).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Energy Star® certified windows and skylights with specified framing, glazing, air leakage, and light allotment based on Energy Star® region (see Addendum III).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows placed to have strategic views of trees, parks, nature etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows located within the building to open internal sightlines and increase natural light.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Inclusion and strategic placement of operable windows where appropriate.

LIGHTING

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Motion censored controlled lighting, especially in common areas and places of little usage.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Energy efficient bulbs throughout the building, especially in high use areas.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Automated lighting system that integrates light dimming features (see Addendum II).

STAIRWAYS & ELEVATORS

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Staircases are located in centralized and accessible places, in clear view of building entrances.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Staircases are creatively constructed; incorporating elements like color, light, art, and music.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stairs are consciously constructed with the ability for comfortable travel in both directions simultaneously.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stairs are consciously constructed with comfortable riser, tread, and landing dimensions (see Addendum IV).

STAIRWAYS & ELEVATORS CONT.

<div><div></div><div></div><div></div></div>	Contiguous staircases without location breaks at each floor.
<div><div></div><div></div><div></div></div>	Signage that clearly orients and directs people to stairs.
<div><div></div><div></div><div></div></div>	Elevators located outside direct view of entrances, to encourage use of stairs.
<div><div></div><div></div><div></div></div>	Elevators programmed not to return to ground floor after every trip.

HALLWAYS & WALKING PATHS

<div><div></div><div></div><div></div></div>	Creation of an uninterrupted internal walking path to encourage exercise (see Addendum V).
<div><div></div><div></div><div></div></div>	Hallways and internal walking paths are easily accessible, and clearly connect community spaces throughout the building.
<div><div></div><div></div><div></div></div>	Hallways and internal walking paths contain easily accessible drinking fountains, benches, and central stair access.
<div><div></div><div></div><div></div></div>	Hallways and internal walking paths are creatively constructed; incorporating elements like color, light, art, and music.
<div><div></div><div></div><div></div></div>	Intermittent markers or signage along walking paths and/or hallways to signify distance traveled.

NOISE REDUCTION

<div><div></div><div></div><div></div></div>	Rooms are organized strategically based on noise production and sensitivity. For example, private rooms further away from public waiting rooms, busy hallways, etc.
<div><div></div><div></div><div></div></div>	Doors and internal windows are strategically located to be mindful of noise.
<div><div></div><div></div><div></div></div>	Doors, windows and walls use materials that reduce noise transference.

APPLIANCES & AIR

<div><div></div><div></div><div></div><div>✓</div></div>	Energy Efficient Heating and Cooling systems (see Addendum VI).
<div><div></div><div></div><div></div></div>	Air filtration systems to remove allergens and contaminants.
<div><div></div><div></div><div></div></div>	External air intake vents are located away from outdoor pollutants, garbage bins, garden etc.
<div><div></div><div></div><div></div><div>✓</div></div>	Energy Star® or similar rating for all applicable appliances (see Addendum VII).
<div><div></div><div></div><div></div></div>	Water filter stations located in public areas, such as kitchens, lobbies, or near bathrooms.
<div><div></div><div></div><div></div><div>✓</div></div>	Water efficient toilets meeting WaterSense standards of efficiency (see Addendum VIII).
<div><div></div><div></div><div></div><div>✓</div></div>	Inclusion of dual flush toilets, that allow for two levels of water depending on liquid or solid waste.
<div><div></div><div></div><div></div></div>	Motion censored sinks, and energy efficient hand dryers.

MAINTENANCE/JANITORIAL

<div><div></div><div></div><div></div></div>	Low pollutant products are used for cleaning and janitorial.
<div><div></div><div></div><div></div></div>	Low to no VOC (volatile organic compound) materials, such as aerosol sprays, pesticides, and paint thinners used in maintenance or daily janitorial duties.

GROUNDS

<div><div></div><div></div><div></div></div>	Well-lit external shared use paths around the grounds for walking and biking, with easy accessibility from building entrances (see Addendum V).
<div><div></div><div></div><div></div></div>	Shared use paths contain benches, and distance markers or signs to signify distance traveled.
<div><div></div><div></div><div></div></div>	Shared use paths are creatively constructed; incorporating elements like color, light, art, and music.
<div><div></div><div></div><div></div></div>	Bike rental station to encourage exercise along external shared use paths.

GROUND S CONT.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Community bike racks located near primary building entrances.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Creation of a greenhouse for use of employees and/or community.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Creation of a community garden, to be maintained by either employees and/or community.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use of storm water and/or greywater for irrigation and/or building reuse (see Addendum IX).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prevalence of shading trees and natural plants that require minimum maintenance, especially around building entrances.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Shading overhangs over each entrance.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The grounds include shaded pavilions and/or eating areas.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Clear and safe crosswalks, lighting, and sidewalks located around building.

PARKS

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	A park is located on the property for public and employee use.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		The park includes playground equipment accessible to the public.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		The playground includes colorful ground designs, such as a globe, map, or community inspired art.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		The park includes a pool or splash park accessible to the public.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		The park contains workout equipment such as elliptical and sit-up machines, pull up bars etc.

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The park includes shaded areas such as pavilions and eating areas to encourage usage on sunny days.

The park includes a designated and fenced in “off-lease” area for dogs.

TRANSPORTATION

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Locker rooms with showers to allow for physical activity during the day or while commuting to work.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Charging stations for electric cars.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bus stop, or easy access to public transportation.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Incentivized ride sharing program where appropriate.

FOOD

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Healthy food options are available for purchase and/or provided to employees.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Healthy food options are available for purchase and/or provided to the public.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If a community garden present, garden produce is available for use by employees and/or the public.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drinking fountains with attached water filter stations are located within the building.

MISCELLANEOUS

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Include standing/raiseable desks in work spaces.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Recycle stations (where available), in accessible public places throughout the building.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The inclusion and incorporation of pet friendly building policies.

ADDENDUM

I ENERGY STAR® Roofing Recommendations:
Installing an ENERGY STAR® certified roof will assist with an estimated 10-15% reduction in air conditioning needs during peak demand periods. Specific certification levels are:

Specifications for Energy Star Qualified Roofing		
Slope	Solar Reflectance	
	Installation	After 3 Years
Steep	0.25	0.15
Low	0.65	0.5

Source: ENERGY STAR Roof Products Key Product Criteria

A Roof Savings Calculator provided by the EPA can be found at: http://rsc.ornl.gov/rsc_main.htm?calc=com

II NOAO Lumens Recommendations:
The National Optical Astronomy Observatory (NOAO) in partnership with the Association of Universities for Research in Astronomy (AURA) and the National Science Foundation (NSF), have created recommended lumen levels for spaces throughout a typical office. See chart below:

Location	Lumens	Location	Lumens
Office Space		Support Spaces (cont.)	
Work station, open or closed offices	500	Mechanical Rooms	200
ADP Areas	500	Communications Rooms	200
Conference Rooms	300	Maintenance Shops	200
Training Rooms	500	Loading Docks	200
Internal Corridors	200	Trash Rooms	200
Auditoria	150-200		
Public Areas		Specialty Areas	
Entrance Lobbies,Atria	200	Dining Areas	150-200
Elevator Lobbies, Public Corridors	200	Kitchens	500
Ped.Tunnels and Bridges	200	Outleased Spaces	500
Stairwells	200	Physical Fitness Space	500
		Child Care Centers	500
Support Spaces		Structural Parking, General Space	50
Toilets	200	Structural Parking, Intersections	100
Staff Locker Rooms	200	Structural Parking, Entrances	500
Storage Rooms, Janitorial Closets	200		
Electrical Rooms, Generator Rooms	200	Source: NOAO Recommended Light Levels	

III ENERGY STAR® Window and Door Recommendations:
For windows and doors, ENERGY STAR® certification levels vary depending on region. Parts of Tennessee fall within either the North-Central or South-Central region.



Source: ENERGYSTAR® Climate Zone Map

Energy Efficiency Requirements for Windows		
Climate Zone	U-Factor*	SHGC**
North-Central	≤ 0.30	≤ 0.40
South-Central	≤ 0.30	≤ 0.25

Energy Efficiency Requirements for Doors			
Glazing Level	U-Factor	SHGC	
Opaque	≤ 0.17	No Rating	
≤ ½-Lite	≤ 0.25	≤ 0.25	
> ½-Lite	≤ 0.30	North-Central	≤ 0.25
		South-Central	≤ 0.40

Energy Efficiency Requirements for Skylights		
Climate Zone	U-Factor	SHGC
North-Central	≤ 0.53	≤ 0.35
South- Southern	≤ 0.53	≤ 0.28

Energy Efficiency Requirements for Skylights		
Climate Zone	U-Factor	SHGC
North-Central	≤ 0.53	≤ 0.35
South- Southern	≤ 0.53	≤ 0.28

*U-Factor/U-Value: Rate of heat loss. Lower numbers indicate better energy efficiency and insulation.
**Solar Heat Gain Coefficient (SHGC): Measured amount of solar radiation/heat allowed through a window or door. Lower numbers indicate better energy efficiency and insulation.

Source: ENERGY STAR® Program Requirements for Residential Windows, Doors, and Skylights

IV Stair dimension Recommendations:
Research recognizes that stairs which are at least 4 ½ ft wide, with 7in risers, 11in tread, and landings located roughly every 11 steps, provide the most efficient and comfortable usage.

Source: Boutelle K.N., et al. (2001). “Using signs, artwork, and music to promote stair use in a public building”. American Journal of Public Health. 91(12). p. 2004–2006.

V Walking Path & Shared Path Dimensions:

Walking paths should be designed with a space consideration of roughly 3.25 ft for every person traveling simultaneously at one location. For example, a path designed for two people to comfortably walk side by side or pass each other would have a 6.5 ft minimum width.

For shared paths with cyclists, width preference should be given towards cyclists. For example, if a 9.75 ft path (3 simultaneous users) includes cyclists, preference could be distributed as 3.25ft for pedestrians and 6.5 feet for cyclists. This allows greater mobility and safety for cyclists. Creating separate paths for cyclists alongside designated walking-paths also promotes mobility and safety.

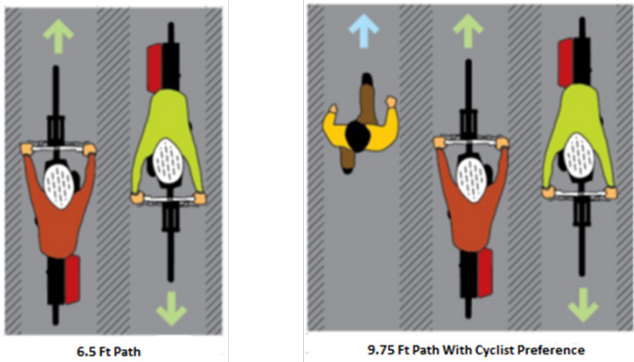


Image Source: Guidance on the Widths of Shared Paths and Separated Bicycle Paths, State of Queensland (Dep. of Transport and Main Roads) 2014

VI ENERGY STAR® Heating and Cooling:

ENERGY STAR® outlines specifications for energy efficient heating and cooling systems. It is worth noting that heating sources which are equal to or greater than 8 HSPF may be eligible for a US Energy Tax Credit.

Equipment	Specifications
Central Air Conditioners	≥15 SEER*/ ≥12.5 EER** for split systems ≥15 SEER/ ≥12 EER for single package equipment including gas/electric package units.
Air Source Heat Pumps	≥ 8.5 HSPF***/ ≥15 SEER/ ≥12.5 EER* for split systems ≥ 8.2 HSPF ≥15 SEER/ ≥12 EER* for single package equipment including gas/electric package units.
Gas Furnaces	Rating of 90% AFUE**** or greater for U.S. South gas furnaces

*Seasonal Energy Efficiency Ratio
**Energy Efficiency Ratio
***Heating Seasonal Performance Factor
**** Annual Fuel Utilization Efficiency

VII ENERGY STAR® list of appliances recommendations:

ENERGY STAR® has a comprehensive list of appliances it certifies. Many appliances are also sold advertising the ENERGY STAR® label. To view specifications for ENERGY STAR® appliances, go to <https://www.energystar.gov/products/>

VIII Toilet Recommendations:

WaterSense® certification is the most recognized label for toilet water efficiency. Water usage can be reduced at least 20% by including WaterSense® certified toilets. WaterSense® toilets use 1.28 gpf or less, with a 1.0 gpf minimum. This is a 20% reduction from the federal standard of 1.6 gpf.

IX Storm Water & Greywater Reuse

The approved recycled use of both Storm water and greywater demands on factors such as water contaminants and intended use. Any water reuse must be preceded by a TN Department of Environment and Conservation Permit.

The EPA released recommended methods of treatment based on some common uses, which can be viewed below. Specific levels of treatment for approval vary, and need to be considered as such.

Allowable uses	Primary Treatment	Secondary Treatment:	Tertiary / Advanced Treatment:
	Sedimentation	Biological Oxidation, Disinfection	Chemical Coagulation, Filtration, Disinfection
	No uses recommended at this level	Surface irrigation of orchards and vineyards Non-food crop irrigation Restricted landscape impoundments Groundwater recharge of non-potable aquifer Wetlands, wildlife habitat, stream augmentation Industrial cooling processes	Landscape and golf course irrigation Toilet flushing Vehicle washing Food crop irrigation Unrestricted recreational impoundment

Source: EPA 2012 guidelines for water reuse

ADDITIONAL RESOURCES

ENERGY STAR® Product Certification, Specifications and Recommendations
<https://www.energystar.gov/products>

ENERGY STAR® Sustainable Building Checklist
<http://energy.gov/eere/femp/downloads/sustainable-buildings-checklist>

EPA Environmental Standards and Recommendations
<https://www.epa.gov/greenerproducts/epas-recommendations-specifications-standards-and-ecolabels>

Federal Leadership in High Performance and Sustainable Buildings
https://archive.epa.gov/greenbuilding/web/pdf/sustainable_mou.pdf

Healthy Active by Design, Buildings Checklist v. 1.2
<http://www.healthyactivebydesign.com/design-features/buildings>

LEED Certifications v. 2009
<http://www.usgbc.org/leed>

NOAO Recommended Light Levels
<https://www.noao.edu/education/qtkit.php>

New York City Active Buildings Guidelines: Promoting Physical Activity and Health in Design
<https://centerforactivedesign.org/dl/guidelines.pdf>

Sustainable Sites Initiative Rating System
<http://www.sustainablesites.org/certification>

The WELL Building Standard v. 1 with May 2016 Addendum.
<https://www.wellcertified.com/articles/well-building-standard-v1-addenda-update-may-2016>

US Department of Energy Building Energy Asset Score Form version 5/31/16
<http://energy.gov/eere/buildings/building-energy-asset-score>

Urban Land Institute Building Healthy Places Toolkit
<http://uli.org/wp-content/uploads/ULI-Documents/Building-Healthy-Places-Toolkit>

ADDITIONAL RESOURCES

Q1:What is the name of your Health Department Building?

Q2: In which county do you work?

Q3: My health department building(s) provides opportunities for staff to excercise either indoors or outdoors
(1 very untrue - 5 very true)

Q4:The building(s) has places for outdoor activities such as a park, garden, etc
(1 very untrue - 5 very true)

Q5:The building(s) is connected to nearby transportation such as bus stops, greenway, park and ride etc.
(1 very untrue - 5 very true)

Q6:The building(s) has a common room or spaces that can be utilized well for mutiple purposes such as health classes, community meeting space, etc
(1 very untrue - 5 very true)

Q7: In terms of building design that promotes physical and mental health, what do you like best about your building?

Q8: If you could renovate your existing building(s) or design a new one, what features would you include to make it a healthier and more pleasant place to work?

Q9:Are there other general changes to the design of your health department building(s) that you would like to see that would improve the function of the department?

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